UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,779	07/01/2003	Thomas B. Mathias	END920030043US1	6983

37945 7590 12/02/2008		

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EXAMINER
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ART UNIT	PAPER NUMBER
2195	

NOTIFICATION DATE	DELIVERY MODE
12/02/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/613,779	MATHIAS ET AL.
	Examiner	Art Unit	
	CAROLINE ARCOS	2195	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _02 September 2008_.

2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-3 and 12-23_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-3 and 12-23_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _02 September 2008_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _09/09/2008_.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-3 and 12-23 are pending for examination.

Claim Objections

2.   Claims 1-3 and 12-23 are objected to because of the following informalities:

a.   As per claims 1, 12 and 19, it is a possible 101 issue because the claim reads on a

mental process or the manipulation of an abstract idea. The claim limitations are not

explicitly directed toward steps being implemented on a computer. As such, they could

be carried out mentally in conjunction with pen and paper. The claimed steps do not

define a computer implemented process (see MPEP 2106). Therefore the claimed

invention is directed to non statutory subject matter. Claims 2-3, 13-18 and 20-23 are

objected to for similar reasons as discussed for their parent claims. (The examiner

suggests the applicant to change "a method for determining" to "a computer implemented

method for determining" in the preamble to overcome the outstanding 35 U.S.C. 101

rejection).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
subject matter which the applicant regards as his invention.

4.   Claims 1-3, and 12-23 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

   a.   The claim language in the following claims is not clearly understood:

   i.   As per claim 1, lines 10, it is unclear what does "said information" refer

   to? (i.e. information indicative of amount of usage of each application only or

   information of LPAR usage of hardware resources). Line 13, it is not clearly

   understood what is the relation between logical partition hardware usage in

   determining a bill for each application usage?

   ii.   As per claim 12, line 11, it is unclear what does "said information "refer

   to? (i.e. information indicative of amount of usage of each application or LPAR

   usage information of hardware resources?).). Line 13, it is not clearly understood

   what is the relation between logical partition hardware usage in determining a bill

   for each application usage?

   iii.   As per claim 19, lines 3, "said system" , it is unclear whether it is referring

   to "a computer system" referred to on line 2, or it is a different system (i.e. if it is

   the same system, it should be referred to as said computer system)

   iv.   As per claim 23, lines 5, it is not clearly understood where does a usage of

   said applications is added to? Line 6, it is unclear what "said usage" refer to. (i.e.

   the usage of said application in said LPAR or percentage utilization of LPAR ?)

   Line 8, it is unclear what values is being subtracted? It is unclear which usage is

   subtracted of which usage.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted

prior art (AAPA).

7. As per claim 1, AAPA teaches the invention substantially as claimed including a method for

determining an amount of usage of applications in a logical partition in a computer system

and a bill for such usage, said method comprising:

executing a guest operating system in said logical partition (pg.1, lines 7-9);

said guest operating system dispatching a plurality of applications in said logical partition

(pg. 3, lines 3-12);

determining, by a hardware usage monitor, logical partition usage information for

hardware resources used by the logical partition (pg.2, lines 23-26);

8. AAPA doesn't explicitly teach that said guest operating system or other program executing

in said logical partition determining information indicative of an amount of usage of each of

said applications;

based on said information, reporting said amount of usage of each of said applications to a

billing function; and

said billing function determining a bill for each of said applications based on said amount

of usage of each of said applications and said logical partition usage of hardware resources.

9. However, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to conclude from AAPA which teach measuring when the application

begins and when it concludes execution that it is well known to calculate the amount of usage

of the said application, also it is well known based on AAPA to track the overall resource

consumption (hardware resource) then determine an amount of usage of each application,

hence the billing of each application is based on each application usage and LPAR hardware

resource consumption

10. As per claim 2, AAPA teaches reporting said amount of usage of each of said applications

(pg. 3, lines 18-19).

11. AAPA doesn't explicitly teach determining said amount of usage of each of said applications

based on said information determined by said guest operating system or said other program

executing in said logical partition

12. However, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to conclude from AAPA which teach measuring when the application

begins and when it concludes execution that it is well known to calculate the amount of usage

of the said application,

13. As per claim 3, AAPA teaches determining a total usage of all of said applications in said

logical partition based on said information determined by said guest operating system or said

other program (pg.2, lines 23-26); and

14. AAPA doesn't explicitly teach that comparing said total usage of all of said applications to

an amount of usage of hardware resources by said logical partition based on said system data,

to audit said amount of usage of said applications in said logical partition or a charge based

on said amount of usage of said applications.

15. However, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to conclude from AAPA teaching of tracking application usage time and

total LPAR hardware consumption to audit and billing that application usage information is

compared to hardware usage in order to audit or charge which is obvious to one of ordinary

skill in the art to track both info to compare their validity.

16. Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant

admitted prior art (AAPA), in view of smith. Smith et al. ("Application service provider

business model implementation on the iseries server", IBM redbooks, 2001, pages 1-259).

17. Smith et al. was introduced in prior office action.

18. As per claim 12, AAPA teaches a method for determining an amount of usage of applications

in a logical partition in a computer system and a bill for such usage, said computer system

including storage private to said logical partition, storage private to said system and system

functions, and storage shared by said logical partition and said system functions, said method

comprising :

executing a guest operating system in said logical partition(pg.1, lines 7-9);

said guest operating system dispatching a plurality of applications in said logical

partition(pg. 3, lines 3-12);

determining, by a hardware usage monitor, logical partition usage information for

hardware resources used by the logical partition(pg.2, lines 23-26);

19. AAPA doesn't explicitly teach determining information indicative of said amount of usage of

each of said applications, and writing said information to said shared storage;

one of said system functions reading said information from said shared storage and

reporting information indicative of said amount of usage of each of said applications to a

billing function; and

said billing function determining a bill for each of said applications based on the

information obtained from said one system function and the logical partition usage

information.

20. However, it would have been obvious to one of ordinary skill in the art at the time th

invention was made to conclude from AAPA teaching of tracking the start and end of

application execution that this is the amount of usage of each application and this information

is forwarded to the billing function including the amount of each application usage and

LPAR hardware resource usage which is reporting information indicative of said amount of

usage of each of said applications to a billing function; and

said billing function determining a bill for each of said applications based on the

information obtained from said one system function and the logical partition usage

information as claimed.

21. AAPA doesn't explicitly teach one of said system functions reading said information from

said shared storage. However, Smith teaches one of said system functions reading said

information from said shared storage (pg. 182, lines 32-39).

22. It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine the teaching of AAPA and Smith because Smith teaching of one of said

system functions reading said information from said shared storage would improve system

performance in efficiency by storing the information in a shared storage and it is retrieved

when it is needed.

23. As per claim 13, Smith teaches reports the amount of usage of each of said applications to

said shared storage (pg. 182, lines 32-34).

24. The combined teaching of AAPA and Smith doesn't explicitly teach that said guest operating system determines the amount of usage of each of said applications. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude from AAPA which teach measuring when the application begins and when it concludes execution that it is well known to calculate the amount of usage of the said application,

25. As per claim 14, Smith teaches that reports the amount of usage to said shared storage. The combined teaching of AAPA and Smith doesn't explicitly teach that said guest operating system calculates the amount of usage of each of said applications using storage private to said logical partition,. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude from AAPA which teach measuring when the application begins and when it concludes execution that it is well known to calculate the amount of usage of the said application,

26. As per claim 15, Smith teaches said one system function processes said information obtained from said shared storage into a different form, and then reports said information in said different form to said billing function (pg. 182, lines 10-13; pg. 182, lines 35-39).

27. As per claim 16, AAPA teaches determining an amount of usage of said logical partition based on system data, without using application usage information generated by said guest operating system (pg. 3, lines 13-16; pg. 3, lines 24-25);

audit said amount of usage of said applications in said logical partition or a charge based

on said amount of usage of said applications (pg. 3, lines 19-25).

28. The combined teaching of AAPA and Smith doesn't explicitly teach determining a total

usage of all of said applications in said logical partition based on said information from said

shared storage; and

    comparing said total usage of all of said applications to said amount of usage of said

logical partition

29. However, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to conclude from AAPA and Smith that based on AAPA it is well

known to determine the start and ending time of each application and having this information

, one would be able to calculate the usage of each application as well as the total usage of all

application in the LPAR. AAPA cited that the system is able to report usage time of each

application and total usage of hardware in the LPAR, this information will be inputted for

auditing purposes. It would have been obvious to one of ordinary skill in the art at the time

the invention was made to conclude from AAPA that both information in compared to

validate the correctness of both information before billing which is part of the auditing

process. For instance, Applicant submitted supplemental IDS filed on 12/29/2003 that stated

on page 2, last paragraph that the auditing tool compares both LPAR utilization report to

confirm (bill) or audit.

30. As per claim 17, AAPA teaches determine the amount of usage of said logical partition based

    on said system data is performed by checking hardware resource consumed by the LPAR.

    AAPA doesn't explicitly teach this step is performed by checking usage bits of processors

    which execute said logical partition.

31. However, it would have been obvious to one of ordinary skill in the art at the time the

    invention was made to conclude based on the combined teaching of AAPA and Smith that it

    is well known at the time of the invention to determine hardware usage by checking the

    usage bits of the processor/ hardware used by said LPAR.

32. As per claim 18, Smith teaches that said bill is based on a peak usage (pg. 27, line 29).

33. As per claim 19, AAPA teaches a method for determining an amount of usage of applications

    in a logical partition in a computer system and auditing such usage, said computer system

    including storage private to said logical partition, storage private to said system and system

    functions, and storage shared by said logical partition and said system functions, said method

    comprising:

      executing a guest operating system in a logical partition(pg.1, lines 7-9);

      said guest operating system dispatching a plurality of applications in said logical

    partition (pg. 3, lines 3-12),

      another of said system functions determining said amount of usage of said logical

    partition based on system data, without using application usage information generated by

said guest operating system (pg. 3, lines 14-16);

34.   AAPA doesn't explicitly teach writing said information to said shared storage;

one of said system functions reading said information from said shared storage.

35. However, Smith teaches writing said information to said shared storage;

one of said system functions reading said information from said shared storage (pg. 26, lines

20-33; pg. 27, lines 20-25; pg. 182, lines 30-32).

36. It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine AAPA and Smith because Smith teaching of writing the information in a

shared storage and this information can be read from that shared storage would improve the

system performance and efficiency by retrieving the information from a shared storage

whenever needed.

37. The combined teaching of AAPA and Smith doesn't explicitly teach determining information

indicative of said amount of usage of each of said applications; determining a total usage of

all of said applications in said logical partition based on said information from said shared

storage;

comparing said total usage of all of said applications in said logical partition to said amount

of usage of said logical partition to audit said amount of usage of said applications in said

logical partition.

38. However, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to conclude from the combined teaching and especially AAPA that it

well known at the time of the invention to report the start and ending time of the application

execution, one would be able to calculate the usage information of each of said application

and calculate the total usage of all the application by summing all usage of all application in

that LPAR. It is also known at the time of the invention to calculate LPAR utilization using

hardware usage for that LPAR, one would conclude from AAPA that both information is

compared to validate the correctness of both information before billing which is part of the

auditing process. For instance, Applicant submitted supplemental IDS filed on 12/29/2003

that stated on page 2, last paragraph that the auditing tool compares both LPAR utilization

(software and hardware utilization) report to confirm (bill) or audit.

39. As per claim 20, AAPA teaches determine the amount of usage of said logical partition based

on said system data is performed by checking hardware resource consumed by the LPAR.

AAPA doesn't explicitly teach this step is performed by checking usage bits of processors

which execute said logical partition.

40. However, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to conclude based on the combined teaching of AAPA and Smith that it

is well known at the time of the invention to determine hardware usage by checking the

usage bits of the processor/ hardware used by said LPAR.

41. As per claim 21, AAPA teaches determining a bill for each of said applications based on said amount of usage of said logical partition.

42. AAPA doesn't explicitly teach that determining a bill for each of said applications based on said usage of each of said applications in said logical partition. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude based AAPA teaching of reporting the start and ending time of the application execution, one would be able to calculate the usage information of each of said application.

43. As per claim 22,The combined teaching of AAPA and Smith doesn't explicitly teach that determining said amount of usage of said logical partition without using application usage information generated by said guest operating system comprises:
computing percent utilization of said logical partition as said logical partition utilization = (actual logical partition usage) X (number of dedicated processors for logical partition or specified processor share for said logical partition X total number of processors).

44. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determining said amount of usage of said logical partition without using application usage information generated by said guest operating system comprises:
computing percent utilization of said logical partition as said logical partition utilization =

(actual logical partition usage) X (number of dedicated processors for logical partition or specified processor share for said logical partition X total number of processors) because it is well know that calculating the percentage of usage of LPAR, one would calculate what is the percentage of usage of LPAR processor usage compared to total resource which is claimed. For instance King at al. (US 6986137 B1) teaches calculating usage percentage of LPAR usage the percentage utilization of processor.

45. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (AAPA), in view of smith. Smith et al. ("Application service provider business model implementation on the iseries server", IBM redbooks, 2001, pages 1-259), as applied to claim 19 above and further in view of Yoshimura et al. (US 7,062,559 B2).

46. As per claim 23, AAPA teaches a method as set forth in claim 19, wherein comparing said total usage of all of said applications in said logical partition to said amount of usage of said logical partition to audit said amount of usage of said applications in said logical partition, comprises:

reading auditing and business rules (pg. 3, lines 20-21);

reading logical partition usage data for said logical partition (pg. 2, lines 23-26; pg. 3, lines 24-25).

47. AAPA doesn't explicitly teach that adding a usage of said applications for said logical partition;

computing percent utilization of said logical partition to form said usage of said

logical partition;

subtracting said logical partition usage data from said usage of said logical partition to

form a difference;

determining whether said difference is within an acceptable range; and

if the difference is within said acceptable range, computing a bill.

48. However, Smith teaches adding a usage of said applications for said logical partition (pg.

182, lines 32-35).

49. the combined teaching of AAPA and Smith doesn't explicitly teach that computing percent

utilization of said logical partition to form said usage of said logical partition;

subtracting said logical partition usage data from said usage of said logical partition to

form a difference;

determining whether said difference is within an acceptable range; and

if the difference is within said acceptable range, computing a bill.

50. However, Yoshimura teaches computing percent utilization of said logical partition to form

said usage of said logical partition (col. 18, 51-56).

51. It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine AAPA, Smith and Yoshimura because Yoshimura teaching of computing

the LPAR percent of utilization would improve system efficiency and one would be able to

fine tune the system based on the percentage of utilization.

52. The combined teaching of AAPA, Smith and Yoshimura doesn't explicitly teach that

subtracting said logical partition usage data from said usage of said logical partition to form a

difference;

      determining whether said difference is within an acceptable range; and

if the difference is within said acceptable range, computing a bill.

53. However, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to conclude from the combined teaching and especially AAPA that the

auditing process which compared the utilization reports (comparing involve subtracting the

value of 2 reports) and by auditing, one would be able to make a judgment whether the

comparing is within an acceptable value, if it is,, the bill will be generated. This concept is

illustrated in AAPA and applicant submission of supplemental IDS filed on 12/29/2003 that

stated on page 2, last paragraph that the auditing tool compares both LPAR utilization report

to confirm (bill) or audit.

Response to Arguments

54.   Applicant's arguments with respect to claims 1-3 and 12-23 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

55.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

56.   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

57.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

US 6986137 B1 teaches Method, system and program products for managing logical processors

of a computing environment.

US 7096469 B1 teaches Method and apparatus for enforcing capacity limitations in a logically

partitioned system.

US 6789100 B2 teaches Interstream control and communications for multi-streaming digital

processors.

58.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CAROLINE ARCOS whose telephone number is (571)270-3151.

The examiner can normally be reached on Monday-Thursday 7:00 AM to 5:30 PM.

59.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

60.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/   /Caroline Arcos/
Supervisory Patent Examiner, Art Unit 2195   Examiner, Art Unit 2195